

ANTIBODY COMPLEXES AND METHODS FOR IMMUNOLABELING

ABSTRACT

5 The present invention provides labeling reagents and methods for labeling primary
antibodies and for detecting a target in a sample using an immuno-labeled complex that
comprises a target-binding antibody and one or more labeling reagents. The labeling
reagents comprise monovalent antibody fragments or non-antibody monomeric proteins
whereby the labeling reagents have affinity for a specific region of the target-binding
10 antibody and are covalently attached to a label. Typically, the labeling reagent is an anti-Fc
Fab or Fab' fragment that was generated by immunizing a goat or rabbit with the Fc
fragment of an antibody. The present invention provides for discrete subsets of labeling
reagent and immuno-labeled complexes that facilitate the simultaneous detection of multiple
targets in a sample wherein the immuno-labeled complexes are distinguished by i) a ratio of
15 label to labeling reagent, or ii) a physical property of said label, or iii) a ratio of labeling
reagent to said target-binding antibody, or iv) by said target-binding antibody. This is
particularly useful for fluorophore labels that can be attached to labeling reagents and
subsequently immuno-labeled complexes in ratios for the detection of multiple targets.